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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/694,974

10/28/2003

Lang H. Nguyen

03090

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7590  
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09/27/2007

EXAMINER

RONESI, VICKEY M

ART UNIT

PAPER NUMBER

1714

MAIL DATE

DELIVERY MODE

09/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/694,974	NGUYEN, LANG H.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Vickey Ronesi	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21,24-34 and 37-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21,24-34 and 37-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
2. All outstanding rejections are withdrawn in light of applicant's arguments filed on 7/9/2007. New grounds of rejection are set forth below. Thus, *a 2<sup>nd</sup> non-final Office action is set forth as follows.*

#### ***Claim Rejections - 35 USC § 112***

3. Claims 42 and 43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The amount of water in the non-aqueous solvent is without basis, i.e., is it based on total weight or volume of the non-aqueous solvent?

#### ***Claim Rejections - 35 USC § 103***

4. Claims 21, 27-34, 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adams et al (US 5,698,016).

Adams et al discloses compositions of modified carbon products, wherein a modified carbon product is functionalized with an organic group that is preferably an ionic group, an ionizable group, or a mixture thereof (col. 5, line 28 to col. 6, line 13) and associates with an anionic amphiphilic ions such as preferred sodium bis(2-ethylhexyl) sulfosuccinate or a homo- or copolymer of acrylic acid or methacrylic acid or salts thereof (col. 2, lines 37-44) (wherein the

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use of ammonium salts is common) in the most preferred of mediums, water (col. 4, lines 46-49). The modified carbon product composition is incorporated into various formulations such as inks and coatings. In particular, the compositions are used in non-aqueous coating compositions including acrylic, urethane, and epoxy resins (col. 8, lines 22-50) and solvents such as aromatic hydrocarbons (col. 8, lines 33-37), e.g., xylene (Example 17, col. 19, line 32).

While Adams et al does not exemplify or explicitly disclose the use of two anionic amphiphilic ions (specifically, the presently claimed combination of an anionic amphiphilic ion such as a sulfosuccinate and another anionic amphiphilic acrylic acid copolymer), it is considered that it would have been well within the capabilities of one of ordinary skill in the art to use two ingredients (i.e., two anionic amphiphilic ions) which are known to impart the same effect given that Adams et al teaches each one, absent a showing of unexpected and surprising results for the combination. It is well settled that it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506, 509, 173 USPQ 356, 359 (CCPA 1972).

5. Claims 21, 24-28, 30-34, 37, 38, 40, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nyssen (WO 00/60015).

It is noted that the international Patent Application WO publication is being utilized for date purposes. However, since WO 00/60015 is in German, in the discussion below, the US equivalent for WO 00/60015, namely US 6,818,050 is referred to in the body of the rejection below. All column and line citations are to the US equivalent.

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Nyssen discloses paint and coating material system comprising a dispersant such as anionic dispersants (e.g., sulfosuccinic esters, alkylbenzenesulfonates, salts of polyacrylic acids and of copolymers of acrylic acid and methacrylate) (col. 5, line 39 to col. 6, line 14); a pigment such as surface-modified carbon blacks (e.g., sulfo- or carboxyl-containing carbon blacks) (col. 3, lines 43-47); binder such as polyesters, alkyd resins, acrylic resins, and epoxy resins (col. 9, line 7 to col. 10, line 5); water (col. 11, lines 1-8); and solvent such as water-miscible solvents and aliphatic or aromatic hydrocarbons, glycol and polyglycol ethers, esters, and ketones (col. 10, lines 45-47).

Nyssen does not explicitly disclose the combined use of anionic surfactants such as a salt of a sulfonate group and a polymer comprising a least one salt of a carboxylic acid group, nevertheless, it is the examiner's position that it would have been obvious to one of ordinary skill in the art to utilize two ingredients which are known to produce the same effect. Case law holds that it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506, 509, 173 USPQ 356, 359 (CCPA 1972).

It is noted that although applicant's claims are drawn to a non-aqueous coating composition and the prior art of Nyssen is drawn to an aqueous composition, it will be noted that applicant's specification discloses that non-aqueous solvent includes water-miscible solvents and that its non-aqueous solvent may include 0-20 % water (paragraph 0038). Nyssen discloses the use of up to 55 wt % solvent. Given that there are no amount limitations regarding water in the presently cited claims and further given that Nyssen teaches the presence of solvent other than water, Nyssen is pertinent and relevant prior art.

6. Claims 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nyssen (WO 00/60015) in view of Batdorf (US 5,268,203).

The discussion with respect to Nyssen in paragraph 5 above is incorporated here by reference.

Although Nyssen discloses the use of sulfosuccinic esters as one of the anionic dispersant, it does not explicitly teach the use of an alkylsulfonate group, in particular, sodium dioctyl sulfosuccinate.

Batdorf teaches that a commercially available and well known anionic surfactant (i.e., dispersant) is sodium dioctyl sulfosuccinate (col. 10, lines 55-62).

Given that Nyssen generically teaches the use of a sulfosuccinate dispersant and given that a well known and commercially available sulfosuccinate dispersant is sodium dioctyl sulfosuccinate, it would have been obvious to one of ordinary skill in the art to utilize the sodium dioctyl sulfosuccinate.

Nyssen is silent about the salt associated with the salts of copolymers of acrylic acid. Nonetheless, it is the examiner's position that it is well known in the art to commonly utilize alkali metal and ammonium salts (note col. 4, lines 38-39 of Nyssen for evidence). Therefore, it would have been well within the capabilities of one of ordinary skill in the art to utilize such a salt as ammonium with the acrylic acid copolymers of Nyssen.

7. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nyssen (WO 00/60015) in view of Adams et al (US 5,698,016).

The discussion with respect to Nyssen in paragraph 5 above is incorporated here by reference.

Nyssen fails to disclose a carbon black with a carboxyphenyl or sulfophenyl group attached to it.

Adams et al discloses compositions of modified carbon products, wherein a modified carbon product is functionalized with an organic group that is preferably an ionic group, an ionizable group, or a mixture thereof—preferably sulfophenyl and carboxyphenyl groups (col. 5, line 28 to col. 6, line 13). Adams et al further teaches that modified carbon products are advantageous to improve dispersibility (col. 6, lines 37-51).

Given that Nyssen discloses the use of functionalized carbon blacks and further given that Adams teaches that carbon black with sulfophenyl or carboxyphenyl groups are advantageous, it would have been obvious to one of ordinary skill in the art to utilize sulfophenyl or carboxyphenyl groups to surface modify the carbon black of Nyssen.

### ***Response to Arguments***

8. Applicant's arguments filed 7/9/2007 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that Adams does not disclose a combination of polyacrylic acid and anionic surfactant and (B) that Adams et al fails to disclose the use of both anionic surfactants and anionic-modified carbon black.

With respect to argument (A), while Adams et al does not exemplify or explicitly disclose the use of two anionic amphiphilic ions, it is considered that it would have been well within the capabilities of one of ordinary skill in the art to use two ingredients which are known

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to impart the same effect. It is well settled that it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506,509, 173 USPQ 356, 359 (CCPA 1972). Therefore, absent evidence to the contrary, the combination of two anionic amphiphilic ions is *prima facie* obvious.

With respect to argument (B), the examiner agrees and thus the rejections of claims which recite anionic-modified carbon black over Adams et al alone have been withdrawn.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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9/24/2007

Vickey Ronesi



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